

SUPPORT FOR THE AMENDMENTS

Claims 1-6 and 8-20 are amended to use wording and structure consistent with U.S. patent law practice.

Support for the amendment of Claims 1,11 and 18 to recite “hydrocarbon polymer” is found on page 3, line 15, in the specification.

No new matter is believed added to this application by entry of this amendment.

Claims 1-6 and 8-20 are active.

REMARKS/ARGUMENTS

The claimed invention is directed to the adhesion of microelectronic components which contain a polymer coating. Conventional teaching in this field of technology has been directed to the removal of hydrocarbons from the surfaces to be bonded in order to obtain a high quality bond (Q.Y. Tong and U. Gosele “Semiconductor Wafer Bonding, Science and Technology”, John Wiley and Sons, Inc., New York (1999), paragraph 5.4.2). However, certain polymeric hydrocarbon materials are useful in the construction of microelectronic components, and therefore, a method for adhesion of such components containing a hydrocarbon layer, which provides high quality bonding, free from hydrocarbon contamination, which is chemically inert and compatible with subsequent processing steps is sought.

The claimed invention addresses this problem by providing a method for molecular adhesion of a second electronic compound on a first electronic compound as presently described in Claim 1 of the claimed invention. No such method is disclosed or suggested in the cited reference.

Applicants respectfully note that independent Claims 1, 11 and 18 are herein amended to recite “hydrocarbon polymer” in the composition of the contact surface.

The rejection of Claims 1-6 and 8-20 under 35 U.S.C. 102(b) over Tong et al. (US 2003/0211705) is respectfully traversed.

Tong does not disclose or suggest a method of bonding wherein a bonding layer is coated on a hydrocarbon polymer as recited in the claimed invention.

Tong describes a bonding method including: surface cleaning, surface activation, alignment of the surfaces to be bonded and bonding through formation of chemical bonds between the aligned activated surfaces. Nowhere does this reference disclose or suggest that the activated layer for bonding is a coating over a hydrocarbon polymer layer.

The Office has cited [0053] to show “the contact surface of the first electronic compound containing a polymer.” However, Applicants respectfully submit that [0053] describes a “chemical reaction **such as polymerization**” between the activated surfaces to be bonded. Such bonds are further described in [0065] and [0066] as -Si-N-N-Si-, -Si-n-Si-, -Si-F-F-Si-, and -Si-O-Si-.

Tong’s reference to polymerization is a description of the propagating formation of intersurface bonds being polymer-like and clearly does not disclose or suggest a hydrocarbon layer coated with a bonding layer.

Applicants respectfully note that Claims 2-6 and 8-20 either depend from Claim 1, include the recited limitation of hydrocarbon polymer or depend from claims with such recitation.

In view of the foregoing, Applicants respectfully submit that the cited reference neither discloses nor suggests a method wherein a bonding layer is coated on a hydrocarbon polymer layer and therefore the reference can neither anticipate nor render obvious the claimed invention. Accordingly, Applicants respectfully request withdrawal of the rejection of Claims 1-6 and 8-20 under 35 U.S.C. 102(b) over Tong et al.

Application No. 10/581,111
Reply to Office Action of March 3, 2008

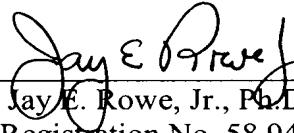
The rejection of Claim 1 and Claims depending therefrom, under 35 U.S.C. § 112, second paragraph, is believed obviated by appropriate amendment. Claims 1-6 and 8-20 are herein amended to use wording and structure consistent with U.S. patent law practice. This amendment includes the use of proper antecedent basis in the wording of the claims.

Withdrawal of the rejection of Claim 1 and Claims depending therefrom, under 35 U.S.C. § 112, second paragraph, is respectfully requested.

Applicants respectfully submit that the above-identified application is now in condition for allowance and early notice of such action is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.
Norman F. Oblon



Jay E. Rowe, Jr., Ph.D.
Registration No. 58,948

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)